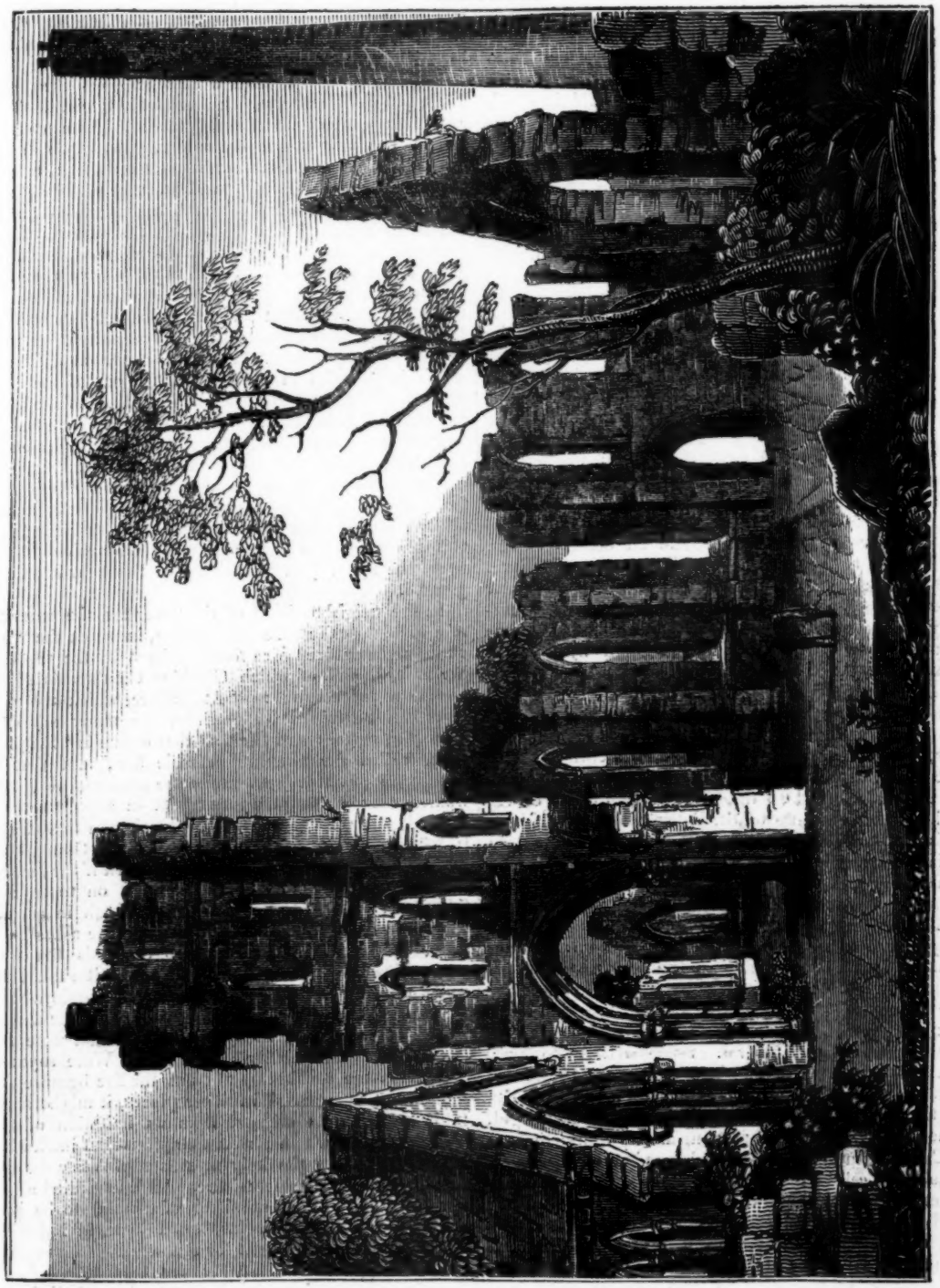
THE PENNY MAGAZINE

OF THE

Society for the Diffusion of Useful Knowledge.

210.] PUBLISHED EVERY SATURDAY. [JULY 11, 1835.

KILDARE.



[Ruins of the Cathedral of Kildare.]

KILDARE, although the capital of a county in Ireland, and giving name to a bishoprick, is a very inconsiderable place, not containing more, according to the last census, than 1753 inhabitants. It is twenty-eight miles from Dublin, and is a borough governed by a sovereign, a recorder, and two portreeves. It is pleasantly situated upon a rising ground; but the buildings are of an inferior description, forming one

tolerable street and a few lanes leading therefrom. The place has no trade, and is chiefly supported by the horse-races, which are held on an extensive common in the neighbourhood, called the Curragh of Kildare. This is a large plain, formerly surrounded by a wood of oaks, which gave the name of *Chilledair* to the town, and was anciently the seat of Druidical worship until the time of St. Brigid, whom we shall presently have occasion to mention. It is esteemed as fine a common as any in Europe, containing about 5000 English acres, and forming a most beautiful lawn, on which large numbers of sheep are pastured. This is the Newmarket of Ireland, and in some respects is considered to exceed our own. The meetings are held in April, June, and September, when king's plates are run for by Irish-bred horses. These plates were originally given at the suggestion of Sir William Temple, who, among other schemes for the benefit of Ireland, recommended this, with a view to the improvement of the Irish breed of horses. The place was, however, remarkable for its horse-races long before king's plates were established.

Although of little importance at present, Kildare contains some interesting evidences of its former consideration. The principal of these is the cathedral, the greater part of which is in ruins, the choir only being now in a fit condition for religious services. The ecclesiastical establishments for which, more than for any thing else, Kildare was formerly distinguished, owe their origin to St. Brigid. This lady, who was the illegitimate daughter of an Irish chieftain, was born in the year 458. In her fourteenth year she received the veil from the hands of St. Patrick, or one of his immediate disciples. She afterwards visited the abbey of Glastonbury in Somersetshire, and on her return (or, at any rate, before 484) founded a nunnery at Kildare. About the same time an abbey was also founded under the same roof for monks, but separated from the nunnery by walls. The monks and nuns had but one church in common, which they entered by different doors. St. Brigid presided as well over the monks as the nuns, and, "strange to tell!" exclaims Archdall, the abbot of the house remained subject to the abbess for many years after the death of the celebrated foundress, which took place on the 1st of February, 523. She was interred at Kildare; but her remains were afterwards removed to the cathedral-church of Down, and laid beside those of St. Patrick and St. Columb. This St. Brigid or Bridget became quite the Virgin Saint of Ireland, and next to the names of the Virgin Mary and St. Patrick her name obtained more reverence than any other in the calendar.

The amount of the influence which this extraordinary female acquired may be estimated from the fact, that she is represented as the foundress not only of the monastery but of the see of Kildare. It is stated that she appointed as bishop a person variously called St. Conlœth, Conlaid, and Conlian, who, with her assistance, erected the cathedral. Some writers, however, contend that there were bishops of Kildare before this personage; but Sir James Ware prefers the authority of the persons who have written the life of St. Brigid. One of these gives this account of the transaction:—"Conlian, an holy bishop and prophet of the Lord, who had a cell in the south part of the plains of Liffi, came in his chariot to St. Brigid, and abode with her; and the holy Brigid elected him bishop in her city of Kildare." In the next century, Aod Oubh, or Black Hugh, the King of Leinster, withdrew to the monastery of Kildare, of which he in time became abbot, and afterwards bishop of the see. The first Englishman who occupied the see was Ralph of Bristol, who died in 1232. This prelate went to great expense in repairing and ornamenting the cathedral. In the reign of Henry VII. it had again fallen into decay, and was repaired by the bishop Edward Lane, who died in 1522. It was a fine old Gothic building, now mostly in ruins. The walls, however, are still standing, together with the south side of the steeple and the walls of the nave, which has on the south side six Gothic arches and six buttresses. The north side of the steeple is level with the ground, and is said to have been beaten down, with other parts of the building, by a battery planted against it during the disturbances in 1641. The choir, in which the church services are still performed, affords little matter for remark. It is kept in decent repair, and a handsome Venetian window supplies the place of an old Gothic one, which was much admired. The south wing, which was formerly a chapel, is a mass of ruins; but two statues in alto-relievo may still be noticed. One of them represents an ancient knight of the Fitzgerald family, clad in very curiously-cut armour, and surrounded by heraldic escutcheons; and the other a bishop with his pastoral staff and mitre, supposed to be the Bishop Lane already mentioned.

At the distance of about thirty yards from the west door of the cathedral stands a very fine specimen of those "Round Towers" which so frequently occur in Ireland, and have occasioned a vast quantity of unprofitable speculation. The round tower at Kildare, which is included in our wood-cut, is one of the best finished and most skilfully-built structures of the kind in Ireland. It is built of white granite to above twelve feet above the ground, the superstructure being of common blue stone. It is about 130 feet in height, and battlemented at the top, and has, about fourteen feet from the foundation, a large arched aperture, apparently intended for a door. At no great distance from this tower is seen the pedestal of an ancient stone cross, the upper part of which still lies near it on the ground.

In the neighbourhood of the tower are the remains of a building called the Fire House, in which the "inextinguishable fire" was formerly kept by the nuns of St. Brigid, and of which Giraldus Cambrensis gives the following account:—"At Kildare, which the glorious Brigid rendered illustrious, are many miracles worthy of notice; and the first that occurs is 'Brigid s Fire,' called the 'inextinguishable fire;' not that it cannot be put out, but because the nuns and religious women are so careful and diligent in supplying and recruiting it with fuel, that from the time of that virgin it hath remained always unextinguished through so many successive years." It had been well if the matter had stopped here; but Giraldus goes on to say:—"Though so vast a quantity of wood hath in such a length of time been consumed in it, yet the ashes have never increased." It seems also that this fire was never blown by the human breath, lest it should be contaminated; but fans or bellows were employed for the purpose. This fire was put out by the Arch bishop of Dublin in the year 1220. What were his reasons does not exactly appear; but Ware says:—"Perhaps the archbishop put out the fire because the custom not being used in other places, it might seem to have taken its original from an imitation of the Vestal Virgins, whom Numa Pompilius first instituted, and dedicated to the holy mysteries of Vesta for the preservation of a perpetual fire. 'He instituted a fire (says Lucius Florus, speaking of Numa) to be preserved by the Vestal Virgins, that a flame, in imitation of the celestial stars, might for ever watch as a guardian over the empire.'" Whatever was the object of this fire, it seems to have been afterwards rekindled and kept burning until the suppression of monasteries in the reign of Henry VIII.

Monument to James Watt, in Westminster Abbey.—In the 26th Number of the 'Penny Magazine' we gave an engraving of the statue, by Mr. Chantrey, to be erected to James Watt, in Westminster Abbey; and we supplied a brief notice of the public meeting in 1824, at which it was resolved that such a tribute should be raised to the memory of one of the great benefactors of the human race. That monument has now been completely opened; it is one of the most beautiful in the Abbey; and is remarkable for the following striking inscription, which is understood to be written by Lord Brougham:—

Not to perpetuate a name
Which must endure while the peaceful arts flourish,
But to show
That mankind have learned to honour those
Who best deserve their gratitude,
The King,
His Ministers, and many of the Nobles
and Commoners of the Realm,
Raised this Monument to
James Watt,
Who, directing the force of an original Genius,
Early exercised in philosophic research,
To the improvement of
The Steam Engine,
Enlarged the resources of his Country,
Increased the power of man,
And rose to an eminent place
Among the most illustrious followers of Science
And the real benefactors of the World.
Born at Greenock MDCCXXXVI.
Died at Heathfield, in Staffordshire, MDCCCXIX.

Treatment of the Gout.—Not more than forty years ago, the gouty had little to hope from medical treatment. Among some, the virtues of patience and flannel had grown into an aphorism, while others sought for aid from the doubtful efficacy of the Bath waters. At length the *Eau Médicinale* was discovered, and all was ease. This celebrated remedy for the gout, like many others which have succeeded it, owes its powers to colchicum, which with the kindred plant veratrum (white hellebore) deserve to be called specifics in this disease. The exultations of the gouty were at first unlimited; it was hoped that a method had been discovered of reconciling health and a gouty habit, and high living; but alas! it was not so; every rose has its thorn, and so has colchicum. One or two attacks of gout may be cured by this potent bulb with impunity; but if the call be repeated too often, colchicum resembles those spirits of Eastern tales who overwhelm their hasty or careless evoker. The paroxysms become more and more frequent, and the sallow and emaciated patient sinks into the grave. Whether this proceeds, as older doctrines might lead one to suppose, from the remedy suppressing the disease too rapidly, and thus preventing the elimination of those noxious humours of which the fit is but the painful expulsion,—or whether it proceeds from a chronic inflammation of the alimentary canal, the poisonous remedy sapping the constitution in its great digestive laboratory, it is difficult to decide. These fatal results have often been produced when patients have taken the management of their cases into their own hands, and, content with present relief, have been unconscious of progressive decay. If common sense were very common,—if the palate and belly had ears,—if physicians were despots,—the gout would be easy of cure, and surplus food might be sent from Grosvenor Square to the surplus population of St. Giles's. But since the facts are otherwise, the gout, combated, but not exterminated, by colchicum, must continue to dwell in gilded chambers, and the poor must console themselves with their perfect immunity from one of the most painful of diseases*. It is clear that gout is a constitutional disease, which it would be vain to attempt to cure by a merely local remedy: the vain attempt has been made, however, and the remedy selected has been veratria,—the alkaloid to which colchicum owes its force. Of course, it must not be applied during the first or acute stage, when the pain is very great, and the parts very red. It is a palliation to local symptoms, but does not attack the disease at its source. On the whole, colchicum is an excellent remedy, though it has no pretensions to the old recommendation of some medicines, "that if they do no good, they can do no harm."

* At a hospital or dispensary, one sees a gouty patient about once in two years, and then he is probably a publican, or very comfortable butler. The last man of the kind we saw had been the coachman of William Pitt.

Why cannot Apes talk?—I have been asked by men of the first education and talent, whether any thing really deficient had been discovered in the organs of voice in the orang-outang to prevent him from speaking? The reader will give me leave to place this matter correctly before him. In speaking, there is first required a certain force of expired air, or an action of the whole muscles of respiration; in the second place, the vocal chords, in the top of the windpipe, must be drawn into accordance by their muscles, else no vibration will take place, and no sound issue; thirdly, the open passages of the throat must be expanded, contracted, or extended by their numerous muscles, in correspondence with the condition of the vocal chords, or glottis; and these must all sympathize before even a simple sound is produced. But to articulate that sound, so that it may become a part of a conventional language, there must be added an action of the pharynx,—of the palate,—of the tongue and lips. The exquisite organization for all this is not visible in the organs of the voice, as they are called:—it is to be found in the nerves which combine all these various parts in one simultaneous act. The meshes of the spider's web, or the cordage of a man-of-war, are few and simple compared with the concealed filaments of nerves which move these parts; and if but one be wanting, or its tone or action disturbed in the slightest degree, everybody knows how a man will stand with his mouth open, twisting his tongue and lips in vain attempts to utter a word. It will now appear that there must be distinct lines of association suited to the organs of voice—different to combine them in the bark of a dog, in the neighing of a horse, or in the shrill whistle of the ape. That there are wide distinctions in the structure of the different classes of animals is most certain; but, independently of those which are apparent, there are secret and minute varieties in the associating chords. The ape, therefore, does not articulate — first, because the organs are not perfect to this end; secondly, because the nerves do not associate these organs in that variety of action which is necessary to speech; and, lastly, were all the exterior apparatus perfect, there is no impulse to that act of speaking.—*Sir C. Bell on the Hand*, Chap. X.

Paper-Making in Tibet.—At a little distance from us, and close to the river, two people are engaged in preparations for making paper. They have two large bags of old paper that has been written upon, and manufactured from the bark of the *Latbarua* formerly mentioned. A few large flat stones are placed near the edge of the water, where a portion of the stream has been divided from the main current by a low piece of sods. On the grass are two frames of wood, covered on one side with fine cloth, and the other is open, forming a shallow tray. The workmen begin by dipping some of the old paper in the water, then beating it upon a flat stone with a small round one till it is reduced to a pulp. One of the trays is then placed in the broad part of the canal, leaving a space for the water to run under it. The pulp is put into a geer pump with water, and worked into a paste: it is then poured on the cloth, and as this is sunk two or three inches in the stream, the water rises through the cloth into the tray, and mixing with the pulp dilutes it. The impurities, which swim, are picked out, and the pulp agitated by the hand until it is supposed to be sufficiently clear, when the current of water is lessened. The workman sees if the cloth be equally covered with pulp, and if any part look thin, he stirs the water with his finger immediately over another that is too thickly covered, and raises a cloud of paste which his finger leads to the thin spot, and by making a little eddy, the motion of which he gradually diminishes, the pulp is made to subside. By a repetition of this simple process, the sheet becomes of an equal thickness throughout, when it is carefully raised out of the water, and placed horizontally on the ground to dry, till the greater part of the moisture is drained off, when it is gradually raised; and when nearly dry, the frame is set upright. When perfectly hard, one corner of the large sheet is raised from the cloth, and the whole detached by the hand. However, this paper is very inferior, as to evenness, to that made in Hindustan.—*Journey in Tibet by W. Moorcroft, in Asiatic Researches*, vol. xii., 1818.

THE ORANG-OUTANG.

[The Female Orang-outang at the Surrey Zoological Gardens.]

Our present wood-cut is a portrait of the interesting animal which has lately become an inmate of the Surrey Zoological Gardens: it is shown in an attitude which displays its mode of action in a state of nature. The 68th Number of the 'Penny Magazine' contains a full description of the physical conformation and appearance of the orang-outang, with a particular account of the habits and dispositions of the living specimen which was brought from Java by Dr. Clarke Abel in 1817, and which was, we believe, the first of the peculiar species ever seen in this country: another arrived in 1831, but died in three days; a third was exhibited at the Egyptian Hall, Piccadilly, in the same year; and a fourth was, about two years since, kept in the Tower. These are, to the best of our knowledge, the only living specimens which had been seen in this country previous to the one now under consideration. The difficulty of transmitting them to England, and the short time which they have been here kept alive, arises principally from their great sensibility to the difference between their native climates and those through which they are brought, and to which they come. Our former account of the orang-outang allows us to limit our present statement to the individual in the Surrey Zoological Gardens.

The animal is one of four which were brought in a trading-vessel to Calcutta, where they were purchased and shipped for this country on board the Orontes. Their deportment during the voyage was similar to that of Dr. Abel's specimen. Like it, they were allowed perfect liberty, and were permitted to clamber about the rigging of the vessel and to gambol with the sailors at pleasure. Like it, also, they were keenly sensible of the decrease of the temperature; and the caboose, or kitchen of the ship, formed the shelter which they preferred at night on account of its warmth. Three of them, however, died before the ship reached England; and, notwithstanding the arrangements which have been made in its favour at the Gardens, the survivor appears altogether so uncomfortable, that there is reason to fear that its remaining existence will not be of long duration.

This specimen, technically described as the *Simia Satyrus* of Linnæus, is a female, and is said at the Gardens to be three years of age. It is smaller than the specimen described in the former article, but in other respects it closely corresponds with the description there given. Its height, from the top of the head to the heel, is two feet two inches, and its weight does not exceed fifteen pounds avoirdupois. The fore limb, from the shoulder to the end of the middle finger, measures the extraordinary length of one foot nine inches; and the length of the hand alone, from the wrist to the tip of the middle finger, is six inches and a

half. The palm of the hand measures three inches and a half; the sole of the foot five inches: and the width over the breast is nine inches.

This animal occupies the principal apartment of the neat and comfortable repository No. 8, on the south side of a small circular pond. This repository, which contains several other animals of kindred species, is, like the monkey-house, warmed by a hot-water apparatus, which constitutes the only provision made for the purpose of giving to the whole a temperature more elevated than that of the season. But, in the case of the orang-outang, a special and very judicious provision has been made, though it still seems scarcely adequate to the poor creature's wants. Her apartment is lined throughout with green baize, in addition to which a blanket is hung up behind her bed. The inner half of the floor is a raised platform, also covered with green baize, upon which is a feather-bed similarly covered. There squats the orang-outang, wrapped up in a doubled blanket. The first appearance she presents to the visitor is rather startling. The only visible parts of her person are the face and the hand with which she holds the blanket about her in front. During our visit, she was several times uncovered, and always settled herself again in the same manner;—that is, sitting on the bed in a stooping posture, and the blanket, which is folded double and spread under her upon the bed, so gathered around her as to permit her to have a complete view of all that is going on in front of her cage. Her large, round, black eyes, peering thus with grave and quiet curiosity from amidst the ample folds of the white blanket, present, in the first instance, a somewhat spectral appearance; and then the association of blankets, in fine weather, with a face and eyes somewhat human, suggests to the visiter quite unexpected ideas of humanity in a state of sickness and suffering. The appearance of the orang-outang, indeed, even when uncovered, affords a strong contrast to that of all the other animals in this repository, and particularly with that of her immediate neighbours, the trim and brisk-looking Jacopo the aëronaut, so denominated on account of his repeated ascents in a balloon with Mr. Green, and the grotesque, inquisitive, vigorous and irritable, but withal good-humoured, blue-faced satyr. There was a little kitten in the same cage, but the orang-outang did not appear to take the least notice of it, not even when the keeper put it up close to her face. The keeper himself, however, seems to have already made some way in her regards, for when he offered his hand, she readily stretched forth her own to him from among the folds of the blanket.

It seemed a pity to encroach upon the poor animal's sole remaining comfort and business of life—that of keeping herself warm—for the sake of satisfying our curiosity, or rather to enable us to make this communication to our readers. However, the keeper entered the cage and attempted to draw off the blanket. The animal resisted with great vigour, holding it tightly around her with both hands, and at the same time showing her teeth and screaming—not, as it appeared to us, with rage, but simply in the way of complaint. She did not make the least attempt, by biting or otherwise, to express anger at the keeper's conduct. The blue-faced satyr, after he had received much less provocation, treacherously took an opportunity of pinching the back of the keeper's hand, after he had shaken it in token of reconciliation. This satyr, however, has so much mischievous good-humour about his eyes, that we are quite willing to believe that he intended this pinch only as a joke.

When the keeper succeeded, again and again, in partially uncovering the orang-outang's person, she applied herself with greater vigour and excitement than her grave and quiet appearance seemed to promise, in again pulling it around her, always disposing it in the same manner as before. Once the man took away the blanket altogether, and put her down from the bed upon the platform. Perceiving that the blanket was not upon the bed, she did not at the moment make any attempt to return, but stood perfectly bewildered, looking around in every direction in search of shelter. She seemed on the point of creeping underneath the bed, when the keeper laid out the blanket upon it, and she immediately re-mounted, and with every appearance of intense gratification, drew it over and around her, and resumed her former quiet and contemplative posture. Another time the man again withdrew the blanket, and brought the animal quite forward to the front of the cage. Seeing no other resource, and receiving a slight invitation from the keeper, she immediately hastened to his bosom, and placing her hands upon his shoulders, so extended herself as to bring as much as possible of her own person in contact with his; but no sooner was the blanket restored to its place than, stretching her long arms first to the platform and then to the bed, she made but two strides, as it were, to her favourite position.

She exhibited an indifference to food not usual with her congeners. She did not deign to hold out her hand for some fruit that was offered. At last she accepted a large strawberrry, and held it with great indifference in her fingers for about five minutes: our attention was then diverted for a moment to the satyr; and in the interval the strawberry had disappeared. She also drank some milk, but without much apparent appetite, from a cup which the keeper held to her lips.

These few particulars will be acceptable to such of our readers as have no opportunity of seeing this very interesting animal, which will, we hope, long remain to enhance the value of that important and useful collection to which it belongs.

TENERIFFE.

Teneriffe is the name of one of the Canary islands, situated on the western coast of Africa. It is in the form of a triangle, each side of which is about thirty-six miles in length, and is computed to contain about 1540 square miles. It consists chiefly of the Great Peak sloping down to the sea, and which, from its singleness and isolation, forms one of the most remarkable volcanic mountains in the world. The island and its peak have been fully investigated and described by Humboldt* and others, from whose accounts we introduce a few statements preliminary to the narrative of an ascent to the summit, with which we have been favoured by a correspondent.

The island of Teneriffe, as well as the other islands of the Canaries, are considered to have been thrown up by the action of a sub-marine volcano; such an origin being indicated by every circumstance in their geological system. This island is divided in the middle by a ridge of mountains, which have been likened to the roof of a church—the peak being the spire in its centre. There is a marked distinction in the aspect which the peak presents from the opposite sides of this ridge. The view of the peak from the port of St. Croix is incomparably less picturesque than that from the port of Orotava on the western coast of Teneriffe. There, a delightful and richly-cultivated plain contrasts admirably with the stern and wild aspect of the volcano. From the groups of palm and banana which fringe the coast to the region of the arbutus, the laurels and the pines, the volcanic rock is covered with the most vigorous vegetation. We may conceive how the people inhabiting even the fine climates of Italy and Greece might believe on the western coast of Teneriffe

* Voyage aux Regions Equinoxales du Nouveau Continent.

that they had found one of the Fortunate Isles. The eastern coast, that of St. Croix, on the contrary, bears altogether a sterile character. The summit of the peak itself is not more arid than the promontory of basaltic lava which extends towards the point of Maga. Five-sixths of the island are composed of rocks, woods, and inaccessible mountains. The peak itself is about 12,000 feet above the level of the sea, and is a very majestic object as seen from the anchorage at St. Croix, notwithstanding the want of picturesque effect on that side of the island. The summit only was visible to Humboldt from thence, the rest of the mountain being enveloped by thick and dark clouds. The cone formed a very brilliant object when illuminated by the first rays of the sun, assuming a brilliant ruddy hue, which, as the sun ascended, changed gradually to a most dazzling white.

The traveller last quoted remarks that in the Cordilleras and Andes it is observed that conical mountains are more frequently free from clouds than those the crest of which is roughened with many small inequalities. But the Peak of Teneriffe, notwithstanding its pyramidal form, is enveloped in clouds for a great part of the year, and one may remain several weeks in the bay of St. Croix without obtaining a view of it. Its position to the west of a great continent, with its isolation in the midst of the sea, are doubtless the causes of this phenomenon.

The crater itself is only 300 feet by 200, and its depth does not exceed 100 feet. This is rather a remarkable circumstance. Vesuvius, which is a mere hillock in comparison with Teneriffe, has a crater of five times this extent. Considering that very elevated volcanoes discharge less matter from their summits than from their lateral fissures, Humboldt sees ground to conclude that when the force and activity of any number of volcanoes are equal, those which are the least elevated will always be found to have the largest craters. The crater of the peak differed in another respect from Vesuvius and most other volcanoes which the same traveller had seen. Their tops preserve a conical form to the very summit; but the Peak of Teneriffe has a very different structure, presenting at its crest a circular wall which environs the crater. At a distance this wall has the appearance of a small cylinder placed upon a truncated cone. The interior of the crater is covered with yellow and white clay, and fragments of decomposed lava, under which are found beautiful octohedral crystals of sulphur. Smoke continually issues from the summit; but it has never been known to emit flames. Sulphuric acid vapours are, however, constantly exhaled from it, issuing from several apertures near the lowest part of the crater. This great chimney in the peak probably operates in exempting Teneriffe from the destructive eruptions by which the neighbouring islands are sometimes convulsed. It doubtless acts in some measure as a safety valve; but it has nevertheless on some occasions proved a dangerous neighbour to the town at the base. In 1704 and 1706 the best harbour in the island was destroyed by lateral eruptions; and in 1798 the adjoining mountain Chahorra ejected lava and scoriæ for three months together. Some of the fragments took from twelve to fifteen seconds to descend, and must, therefore, have been thrown to the height of 3000 feet.

Travellers have been apprized by experience that the summits of very elevated mountains do not afford such picturesque effects and fine views as mountains of inferior height, such as Vesuvius and Puy-de-Dôme afford. Colossal mountains, like Chimborazo and Mont-Rosa, have a mass so considerable, that the plain country, covered with rich vegetation, can only be viewed at so great a distance, that it appears overspread and obscured by a bluish or vapoury tint. But the Peak of Teneriffe, by its slender form and local position, unites the advantages offered by less exalted summits with those which arise from very great elevation. From the summit the spectator not only discovers a vast horizon of sea, elevated above the highest summits of the mountains in the adjacent isles, but he can also view the forests of Teneriffe and the inhabited places in a proximity which affords the finest contrasts of form and colour. The appearance of proximity in which the hamlets, vineyards, and gardens of the coast are seen from the summit of the peak, must, in a great degree, be owing to the astonishing transparency of the atmosphere: for, notwithstanding the great distance, the houses, the sails of vessels, and the trunks of trees are plainly distinguishable, and the rich vegetation of the plains appears in the most lively colours.

The island of Teneriffe enjoys a delightful climate, varying with the elevation from the warmth of the equinoctial regions to the colder climates of Europe. The scenery also is of remarkable beauty. The date-tree, the plantain, the sugar-cane, the olive-tree, and the Indian fig are cultivated. Wheat is reaped from the end of March to the beginning of May; and the bread-fruit tree, and the cinnamon, cocoa, and coffee plants have been successfully cultivated. Above this lowest and most productive region, rises the region of laurels, then the plantation of chestnuts, then the vast forest of pines, then the extensive plain, like a sea of sand, and, lastly, the Malpays, covered with loose fragments of lava. At the extremity of the Malpays is the plain of Rambleta, with the fissures which discharge watery and heated vapours.

The port of St. Croix may be considered as a grand caravanserai situated upon the route to India and America. Most of the accounts of voyages commence with a description of Madeira and Teneriffe. Humboldt mentions that he could not find at St. Croix a single person who had ever ascended the peak, although the enterprise is so frequent among casual visitors. As curious objects are always more interesting to strangers than to those who live among them, there is nothing in this to occasion surprise. We now introduce the account furnished by our correspondent.

"On the 29th of August, 1833, our party, consisting of five Englishmen, three Spaniards, one Portuguese, and two Americans, with a correspondent appendage of cavalry, muleteers, &c., set out from Port Orotava at four o'clock in the morning, in order to avoid as much as possible the intense heat of the sun. The beginning of our journey was delightful. In the course of an hour we had ascended the ridge of mountains that forms the western boundary of the valley of Orotava, the view of which as we rode along was extremely interesting. At first we could scarcely perceive it through the haze of the morning; but when the sun was fairly above the mountains on the opposite side, our situation afforded us a most splendid view of this beautiful valley. We travelled on very pleasantly as far as Las Canadas, and then halted to breakfast, after which, having reloaded our provision-mule, we were again in motion. The remainder of our journey to the foot of the peak was over an extensive sandy plain, and we soon became exceedingly fatigued from the effects of the scorching sun above us, and the oppressive heat reflected from the sand beneath. It took us about three hours to traverse this desert plain; and to keep up the spirits of the muleteers, with the prospect of a good supper, we shot a kid from the flocks, which are here nearly wild. On arriving at the foot of the peak the first day's journey is nearly at an end. An ascent of about five minutes brought us to the Estancia, or resting-place, where we immediately set about pitching our tent, which the violence of the wind rendered a work of some difficulty. The muleteers were sent to collect

fuel, and after a few preparatory arrangements we dined and spent a pleasant afternoon. Some of the party, however, were too much knocked up to partake of the mirth of the others, being very sick from the fatigue of the journey and the sudden change of temperature.

"Towards evening we had a glorious fire blazing, and it was very acceptable; for the cold began to be felt severely, and we sat around it till between nine and ten o'clock. The muleteers, in the mean time, were busily employed in giving a good account of the kid that was shot in the morning. A fashionable cook would have been horror-struck at their method of preparing this repast, though it had great simplicity to recommend it: a leg or shoulder stuck upon a pole was thrust into the fire, and after being a little singed was devoured without any apparent want of relish. About ten o'clock we retired to rest. Our party, with the exception of myself, huddled into the tent where there was only room for three or four to lie down; I very foolishly preferred the outside, for notwithstanding a blazing fire at my feet, and a good cloak and blanket, the cold was so intense that I found it impossible to sleep; neither did the unevenness of the stones on which I was lying contribute much to assist my repose. The rest of the party fared better, for the very circumstance of their being packed in such close quarters ensured a comfortable temperature.

"At about half-past twelve P. M., we were again upon the move, notwithstanding the remonstrances of a young Spaniard and myself (who being the only two of the party who had visited the peak before, knew how much too early it was); but we could not persuade our companions, who were very anxious to be on the top of the peak at sun-rise, which we could have accomplished as well, had we started three hours later. Little did they anticipate the miserable night we were to undergo. Ever since our arrival at the Estancia the wind had been blowing very fresh, and now the higher we ascended the more we felt it. Never did I feel such a piercing blast, and it was so exceedingly tempestuous, that we were obliged to halt at every dozen steps to take breath and imbibe a comparatively warmer air under the lee of some projecting rock.

"Many and long were the pauses made on every occasion of finding a little shelter, though a state of inaction at midnight on the peak without so much as a cloak (for ours were left in the tent to avoid incumbrance) was far from being agreeable. At length, seeing no hope of the tempest abating, we determined to face it as resolutely as we could. We arrived at the Sugar-Loaf at half-past six, having been six hours in performing a distance, which on ordinary occasions is easily accomplished in two. The ground we had passed over from the Estancia to the Sugar-Loaf consisted of a rugged bed of lava.

"The Sugar-Loaf, so called from its shape, is the crown of the peak, and is the most difficult part of the ascent from its nearer approach to the perpendicular, and consisting of loose lava, very much like gravel, which gives way under the feet, and sometimes brings the adventurer down at one step, what it has cost him six or seven to gain. A sulphureous smoke, also, is constantly oozing through the surface in this part, and has a very unpleasant effect upon some stomachs. Perseverance at last brought the whole party to the top: few of them, however, stayed more than a very few moments to indulge their curiosity, not approving of the state of things there. On approaching the summit, the noise made by the wind in the crater put us all on the *qui vive*; there was something so unnatural in it, that it is useless to attempt to describe it, indeed it scarcely admits of a simile. Such was the noise and commotion, that we really felt some scruples as to the prudence of proceeding, not knowing whether we might not expect some sudden eruption. When we did gain the summit, the greatest caution and our best exertions were necessary to maintain our footing: indeed, had we not crouched down behind the rocks and clung to them when exposed to the wind, it is not easy to say what might have happened to us. It was quite impossible to walk about and examine the crater. The superfices consisted of a very brilliant sulphur, which was so excessively hot, that it was out of the question to remain more than a minute or two, without having ones boots burnt.

"Being unable in our situation to see anything more interesting than clouds flying by us at an incredible velocity, we soon rejoined the others who had been induced to descend on the first impression which such an unfavourable view created; indeed we could not have been more unfortunate in selecting a day: for weeks previous the weather had been beautifully calm and clear; but now, instead of the anticipated view of sun-rise, Teneriffe just under us, and the six other Canary islands in the distance, we could scarcely see half a mile around us.

"On returning to the Estancia, we visited the ice-cave, a strange *lusus naturæ*, if I may so term it; at least it seems wonderful that in a bed of lava like that of which this part of the Peak is composed, there should be found the slightest moisture, much more so a spring. The water is distilled very gently through the rocks above the cave, and is, I think, the best and coldest I ever tasted: the greatest part of the surface is frozen. Leaving this, we once more made for the Estancia, before reaching which every bone in my skin ached with fatigue, and my knees quivered as if they would no longer support my body. On our arrival, we were all glad to lie down for an hour.

"By the time we had breakfasted and collected a few specimens of lava, obsidian, and pumice-stone,—had sent on our baggage and mounted our mules,—the sun was nearly at the meridian. We had consequently a very hot ride over the sandy plain, looking anxiously to the clouds beneath us for protection from the intolerable heat. These clouds have a very strange and interesting appearance when viewed from above; the only thing I can compare them to is a sea of wool. When at length, to our great satisfaction, we had descended to the clouds, we dined in the midst of them. Dining in the clouds may seem romantic, but there is nothing particular in it.

"In the evening our whole party arrived in safety at Port Orotava, having acquired, in a few hours, a good practical knowledge, if of nothing else, at least of the effects of excessive heat, cold, and wind.

"On my former excursion I lost all the skin off my face, but on this occasion I was unmanly enough to wear a veil, which saved me very much."

CIDER.

CIDER, which is the fermented juice of apples, is conjectured to have been originally known in Africa, it being noticed by the two African fathers, Tertullian and Augustine, and it was introduced by the Carthaginians into Biscay; where, as well as in other countries uncongenial to the culture of the vine, it has been usefully adopted. It appears that the Normans obtained it from Biscay, and if *cicera* means cider, the mention of it occurs in Hengist's feast in Nennius, which is not improbable, because *cyder* is Anglo-Saxon. It is not known from whence we first received the cultivated apple, though in its wild state it is probably indigenous. In the time of Pliny upwards of twenty varieties were known, and Parkinson, in 1629, enumerates fifty-seven kinds. Gibson says, that Lord Scudamore, ambassador to the court of France in the reign of Charles I., obtained scions of cider-apple trees in Normandy, and

encouraged the grafting of them in Herefordshire, which has since been so celebrated for its cider. Hartlib, in 1650, believes that there were 500 sorts in this country.

The fruit-catalogue of the London Horticultural Society of 1831 contains the names of 1400 varieties of apple, and it does not include many of the names known in the west of England, though perhaps some of them may be synonyms. Apple-trees were anciently sprinkled with a libation of cider and toast on Christmas Day or Twelfth Eve, and this, which was probably a remain of the sacrifice to Pomona, was considered conducive to the production of an abundant crop; and on St. James's day (July 25), the apples were blessed by the priest. The apples used for cider in the west of England are, among others, the Longney Russet—the Exel—the Duke—the Ansell—the Styre—the Redstreak—the Golden Harvey—the Devonshire Wilding, &c., &c., of which the Styre and some others are becoming extinct; but their loss is supplied by new apples of equal excellence. Generally speaking, those apples that are considerably astringent, and are unfit for the table or culinary purposes, make the best cider; while the Ashmead Pippin, which is sweet, and perhaps one of the best table-apples that we have, is not at all adapted for cider. Different apples are sometimes advantageously used together for the production of cider, and almost every cider-maker has some favourite sort, and some peculiarity in the manufacture. Mr. Knight has ascertained that the specific gravity of the juice of any apple recently expressed denotes with very considerable certainty the strength of the future cider; and, according to Mr. Brande's table, the highest average of spirit or alcohol per cent. in cider is 9·87.

The process of cider-making in the West of England is to have the apple-trees gently shaken at two or three different times, that only the ripest fruit may fall; the apples are then laid in heaps, which, if circumstances permit, should be under cover, with a free admission of air. They are suffered to remain ten days or a fortnight, and some kinds even longer; and the good cider-maker takes care that the decayed apples and other impurities may be removed before they are taken to the cider-mill, where they are crushed by a large circular stone which is turned by a horse. When the apples are completely mashed, the must, as the crushed apples are then called, is placed in large square pieces of hair-cloth, each hair-cloth being folded over so that nothing but the juice can escape when they are put under the screw-press to which they are removed, and where they remain till the juice is all expressed. The juice is received into a large tub, from which it is conveyed to the casks. Those who do not rack the cider (about which there is a difference of opinion) cover the bung-hole of the cask with a tile, and let it stay till March or April, when to every cask of 100 gallons is put half a pound of hops, and a little colouring made of burnt sugar, and the cider is then stopped close, and is fit for drinking at the end of the year. It is doubtful whether the hops improve the cider, but they probably make it keep better: this method makes the strong cider, which is the principal beverage used in the cider countries; that consumed in London being prepared and sweetened by persons who purchase the cider from the maker.

In Devonshire the cider is racked (which is, drawing the clear cider from the dregs, and putting it into clean casks) as often as the fermentation comes on, a brimstone-match being burnt in each cask before the cider is put into it: this management preserves the sweetness, but in an equal proportion diminishes the strength. Seven or eight sacks of apples will afford about a hundred gallons of cider, the expense of making which does not exceed 10*s*. A cider-mill has been lately constructed in Gloucestershire, which is much superior to the old mill; it is driven by water, and makes from 300 to 400 gallons a-day. In this mill the apples are placed in a large box, with an aperture in the bottom, which drops the apples between two iron rollers; these break them in pieces, after which they fall between two stone rollers set so close to each other as to crush the kernels of the apples, which is essential to the flavour of the cider. The must is in this mill received into a large tub beneath the rollers, and from thence put into the press.

Adulteration of Oils.—Olive-oil designed for the table is often adulterated with the oil of the poppy, and that which is used in the arts by the addition of rape-oil. Rousseau has proposed a method of detecting these adulterations, founded on this, that the conducting power of olive-oil for electricity is 675 times less than that of any other vegetable-oil. He employs for this purpose a galvanic pile, one of whose poles communicates with the earth, while a wire connected with the other is brought near a feebly-magnetized and freely-suspended needle. The purity or impurity of the oil is known by the degree in which the declination of the needle is diminished on applying a drop of it to this wire. Two drops of oil of poppies are sufficient to quadruple the conducting power of three drams of olive-oil. It is known that the conducting power of water depends on the salts which it holds in solution, may not the same thing be the case with the oils?—May they not owe their conducting power to the quantity or the kind of salts which they contain?—*Raspail's Chimie Organique*, translated by Henderson, § 1066.

Caffre Fair—The following account of the mode of barter as pursued at a Caffre Fair, held at Fort Wiltshire, about forty-five miles from Graham's Town, Cape of Good Hope, is extracted from Lieutenant Holman's 'Travels,' who gives it from the 'South African Advertiser.' "At eleven o'clock on Wednesday morning a flag is hoisted from the Fort, and almost immediately after, straggling groups of Caffres may be seen advancing from the mountain tops, the women bearing on their heads the merchandise for the fair, consisting of hides, horns, mats, milk, and green forage, and accompanied by their husbands. On arriving at the market, the hides are ranged in front, the horns immediately behind them, then the mats, milk, and green forage. The average number of hides appears to be about 800, and from 1000 to 2000 horns. A small space is left between the property of each Caffre, and thus a very long front line is extended. Mats may be obtained in any number by bespeaking them. In exchange for these articles, the Caffre trader offers beads, buttons, brass wire, and common handkerchiefs. Each trader is attended by a soldier from the Fort, and four or five Caffre servants, who visit the fair for this purpose, and are paid by the trader. The business of the soldier is to prevent pilfering, and preserve order: in case of dispute, which seldom arises, the matter is referred to the commandant of the Fort, whose decision is final. The number of licensed traders is from eighteen to twenty; and by a private arrangement among themselves, the barter commences at two o'clock, the hour being made known by sound of trumpet from the Fort: at this moment all is bustle, and the rapidity of the exchange of property is truly astonishing. The horns are first disposed of; then a pause is observed for a quarter of an hour, when the trumpet sounds again, and the barter for the hides commences with, if possible, increased alacrity. Whatever a trader is disposed to offer for a hide he places on it, and if the Caffre woman does not approve of it, he perhaps adds another button or a bit of wire, and when she deems the compensation adequate, she takes it up: this is the signal for the trader's servant, who immediately snatches away the hide, and runs a rope through a hole that is formed in it by pegging it down to dry, and then proceeds to the next hide. In this manner all the hides and horns are purchased in the course of an hour. The mats, milk, and forage, not being considered such staple articles, are generally disposed of before the first trumpet sounds, and in one hour and a half the whole business of the fair is completed. The fair is held immediately in front of the barracks."

Printed by WILLIAM CLOWES and SONS, Stamford Street.